

Part V**Traffic Control Systems for Railroad/Highway****Grade Crossings****A****General Provisions****Sec. 14-298-900 Functions**

Traffic control systems for railroad/highway grade crossings include all signs, markings, signals, control or warning devices, and illumination devices and their supports along highways approaching and at railroad/highway crossings at-grade.

Sec. 14-298-901 Legal Authority

The determination of need and selection of devices at a grade crossing shall be made by the public agency with jurisdictional authority.

Sec. 14-298-902 Standardization

- (a) Subject to such determination and selection, the design, installation and operations shall be in accordance with standards contained herein.
- (b) Where a railroad track has been abandoned or its use discontinued, all related traffic control signs, markings, signals and devices shall be removed and the tracks should be removed or covered to provide a safe roadway.
- (c) All dimensions in this part are expressed in English units. Any Connecticut Department of Transportation standards, manuals and guidelines that have been developed in metric dimensions are considered equivalent.

B**Signs and Pavement Markings****Sec. 14-298-903 Railroad Crossing Sign (Crossbuck)**

- (a) The railroad crossing sign, commonly identified as the "crossbuck" sign, shall be white reflectorized with the words "Railroad Crossing" in black lettering.

- (b) As a minimum, one crossbuck sign shall be used on each roadway approach to every grade crossing, alone or in combination with other traffic control devices. If there are two or more tracks between the signs, the number of tracks shall be indicated on an auxiliary sign of inverted T-shape mounted below the crossbuck.
- (c) The crossbuck sign shall be installed on the right-hand side of the roadway on each approach to the crossing. Where an engineering study finds restricted sight distance or unfavorable road geometry, additional crossbuck signs should be installed. Crossbuck signs should be located not less than 12' from the centerline of the nearest track and as near thereto as possible. Where crossing signals are used, the crossbuck is an integral part of the signal assembly.

Sec. 14-298-904 Railroad Advance Warning Sign

- (a) The railroad advance warning sign shall be yellow reflectorized background with black legend.
- (b) A railroad advance warning sign shall be used on each roadway in advance of every grade crossing except on low volume, low-speed roadways crossing minor spurs or other tracks which are infrequently used and which are flagged by train crews, in the business districts of large cities where active grade crossing traffic control devices are in use or where physical conditions do not permit even a partially effective display of the sign. On divided highways it is desirable to erect an additional sign on the left side of the roadway.
- (c) Placement of the sign shall be normally 750 feet or more in advance of the crossing in rural areas and 250 feet in advance of the crossing in urban areas except that in a residential or business district where low speeds are prevalent the sign may be placed a minimum distance of 100 feet from the crossing. If there is a street intersection within 100 feet, an additional sign or signs may be placed to warn traffic approaching the crossing from each intersected street.

Sec. 14-298-905 Turn Restriction Sign

- (a) At a signalized highway intersection within 200 feet of a grade crossing, where the intersection traffic control signals are preempted by the approach of a train, all existing turning movements toward the grade crossing should be prohibited by proper placement of a "No Right Turn" sign or a "No Left Turn" sign or both. In each case these signs shall be visible only when the restriction is to be in effect.
- (b) The signs shall be black and white and have a standard size of 24 inches by 30 inches.

Sec. 14-298-906 "Do Not Stop on Tracks" Sign

- (a) Whenever an engineering study determines that the potential for vehicles stopping on the tracks is high, a "Do Not Stop on Tracks" sign should be used. The sign should normally be placed on the far right side of the grade crossing. On multi-lane roads and one-way roadways, a second sign should be placed on the far left side of the grade crossing.
- (b) The sign shall be white reflectorized with the words "Do Not Stop on Tracks" in black lettering.

Sec. 14-298-907 Pavement Markings

- (a) Pavement markings in advance of a grade crossing shall consist of an X, the letters RR, a no-passing marking (2-lane roads), and certain transverse lines.
- (b) Identical markings shall be placed in each approach lane on all paved approaches to grade crossings where grade crossing signals or automatic gates are located and at all other grade crossings where the prevailing speeds of highway traffic is 40 mph or greater.
- (c) The markings shall also be placed at crossings where engineering studies indicate there is a significant potential conflict between vehicles and trains. At minor crossings or in urban areas, these markings may be omitted if engineering study indicates that other devices installed provide suitable control.

C**Crossing Signals****Sec. 14-298-908 Application**

- (a) Flashing Light Signal -- When indicating the approach or presence of a train, the flashing light signal shall display toward approaching highway traffic the aspect of two red lights in a horizontal line flashing alternately. The typical flashing light signal assembly on a side of the roadway location includes a standard crossbuck sign and where there is more than one track an auxiliary "number of tracks" sign, all of which indicate to vehicle operators and pedestrians at all times the location of a grade crossing. A bell may be included in the assembly.
- (b) The flashing light signals should normally be placed to the right of approaching highway traffic on all roadway approaches to a crossing. At crossings of a highway with traffic in both directions, flashing

lights shall be placed on each side of the tracks. On one-way streets and divided highways, signals shall be placed on the approach side of the crossing normally on both sides of the roadway and may be equipped with back lights. Where required for better visibility to approaching traffic, cantilever-mounted flashing light signals should be used. Additional signals may be mounted on the same support and directed toward roadway approaches other than the principal highway.

- (c) Gate -- A gate is a traffic control device used as an adjunct to flashing lights. The device consists of a drive mechanism and a fully reflectorized red and white striped gate arm with lights and which, in the down position, extends across the approaching lanes of highway traffic about 4 feet above the top of the pavement. The flashing light signal may be supported on the same post with the gate mechanism or separately mounted. In its normal upright position when no train is approaching or occupying the crossing, the gate arm should be vertical or nearly so. Minimum clearance is 2 feet from face of vertical curb to closest part of signal or gate arm in its upright position for a distance of 17 feet above the crown of the roadway. Where there is no curb, a minimum horizontal clearance of 2 feet from edge of a paved or surfaced shoulder shall be provided with a minimum clearance of 6 feet from the edge of the traveled roadway.

Sec. 14-298-909 Operation

- (a) Sequence of Operation (Flashing Lights) -- The flashing lights shall operate for a minimum of 20 seconds before arrival of each train. The operation shall continue until the train clears the crossing.
- (b) Sequence of Operation (Gates) -- The flashing lights and lights on the gate shall operate for a minimum of 20 seconds before arrival of any train. The gate shall start its downward motion a minimum of 3 seconds after the lights begin to operate and shall reach its horizontal position a minimum of 12 seconds before the arrival of any train. When the train clears the crossing and no other train is approaching, the gate shall ascend to its upright position in not more than 12 seconds, following which the flashing lights and lights on the gate shall cease operation.
- (c) Sequence of Operation (Bell) -- The bell, when used, shall begin ringing when the flashing lights begin operation and should continue ringing until the lights cease operation or until a gate begins its upward motion after the train clears the crossing.

Sec. 14-298-910 Motorist Response to Railroad/Highway Grade Crossing Signals

Whenever a clearly visible electric or mechanical device is activated, a crossing gate is lowered or a flagman gives or continues to give a signal indicating the approach or passage of a railroad train, the driver of an approaching vehicle shall:

- (a) stop within 50 feet, but not less than 15 feet, from the nearest rail of such railroad and shall refrain from proceeding until the train shall have passed;
- (b) not drive any vehicle through, around or under any gate or barrier at a railroad crossing while such gate or barrier is in a horizontal position across the approaching traffic lanes or is being lowered or raised.

Sec. 14-298-911 Traffic Signals at or Near Grade Crossings

- (a) When highway intersection traffic control signals are within 200 feet of a railroad grade crossing equipped with an active traffic control system, the normal sequence of highway intersection signal indications should be preempted upon approach of trains to avoid entrapment of vehicles on the crossing by conflicting aspects of the highway traffic signals and the grade crossing signals. Where multiple or successive preemption may occur from differing modes, train actuation should receive first priority and emergency vehicles second priority.
- (b) Highway traffic control signals shall not be used on mainline railroad crossings in lieu of flashing light signals. However, at industrial track crossings and other places where train movements are very slow (as in switching operations), highway traffic control signals may be used in lieu of conventional flashing light signals to warn vehicle operations of the approach or presence of a train.